

REMARKS

1-28 and 54-55
Claims ~~xx~~ are pending in this application.

Preliminary Comments on Johnson and George References

As we focus more clearly on the level at which Johnson and George operate, it is clear that Johnson teaches device driver architecture, underlying an OS, and George operates on top of the OS, without regard for details of the architecture of OS device drivers. The Examiner points to Johnson FIG. 5 and the accompanying explanation at 15:33-16:53. Of course, this needs to be read in the context of the I2O specification that is explained at 21:50-3:49. Looking at FIG. 5, the highest level depicted is the OS 120 level. Everything that Johnson has invented is under the covers (105-109), improving on device driver architecture that the OS isolate from and abstracts for application programs. Instead of using the OSI seven-layer model, FIG. 5 gives us the useful dividing line of within the OS versus built on top of the OS. Device drivers are within the OS and application programs run on top of the OS.

George FIG. 3 *et seq.* depict an application program, not the guts of an operating system. Delivery of message is the prudence of the SECS-I standard. Referring to FIG. 3, the OS delivers SECS-II messages 40 to the SECS-II Translation Program 42. George 2:37-42. Operation of the translation program is detailed in FIGS. 4-15, which depict processing of SECS-II messages, beginning with a packet received 100. To wit, George's "invention includes translation of SECS-II encoded information." *Id.*, 3:63-64. There is no doubt that George discloses a program built on top of an OS.

Combination of Johnson and George would naturally produce an OS that uses Johnson's efficient device driver design with George's translation program naively running, unmodified, over the Johnson-improved OS.

The natural and straight-forward combination of Johnson and George would be no closer to the claims of this application than Johnson or George by itself, because the two references teach address software technology on opposite sides of the OS-program interface.

Rejection Under 35 U.S.C. § 103(a) of Claims 1-6, 13-22 and 26-28

The Examiner rejects **claims 1-6, 13-22 and 26-28** under 35 U.S.C. § 103(a) as unpatentable over Johnson (U.S. Patent Number 6,591,310 B1) in view of George (U.S.

Patent Number 5,657,252) in further view of Walker (U.S. Patent Number 6,233,613 B1).

Applicants respectfully submit that claims 1-6, 13-22 and 26-28 should be allowable over Johnson in view of George in further view of Walker.

Claims 1, 16 and 22

Claim 1 includes the limitations:

providing a removable listening device to monitor a wired communications channel between one or more tool hosts and one or more tools

recording report and report trigger definitions sent by the tool hosts to the tools;

matching a first triggered report from the tools with the report and report trigger definitions to generate a first context-insensitive report before processing a second triggered report;

outputting the first context-insensitive report in a field tagged format

Claim 16 substitutes for the matching and outputting elements the limitations:

recording report trigger definitions sent by the tool hosts to the tools, said report trigger definitions defining events that trigger reporting; and

matching a first triggered report from the tools with the report and report trigger definitions to generate a first context-insensitive report before processing a second triggered report, the reports not being accompanied by the report or report trigger definitions

Claim 22 adds the limitation, similar to the final element of claim 1:

further including outputting the first context-insensitive report in a field tagged format

These limitations are not found in Johnson in view of George in further view of Walker.

The Examiner argues (OA 3 ¶ 2) that the basic I2O standard described in Johnson's background section meets the limitation of providing listening device to monitor a wired communication channel. The omitted word "removable" is one downfall of this argument. A removable listening device monitoring a communication channel is not the tool host or the tool at the ends of the channel, it is an independent snooper. Clear meaning is give to listening device in [0051] and elsewhere, which the Examiner has not taken into account in this rejection. The I2O configuration described in Johnson

2:22-38 talks about the split driver architecture implemented on the tool host or the tool. It says nothing about the communications channel between a tool host and a tool, much less a removable listening device. This is reason enough for the Examiner to withdraw this § 103(a) rejection, because Johnson does not supply any part of the first claim element.

The Examiner further argues (OA 3 ¶ 2) that Johnson includes *recording report and report trigger definitions sent by the tool hosts to the tools*. Clear meaning is given to tool host in [0050] and elsewhere, which the Examiner has not taken into account in this rejection. The cited passage, Johnson at 13:63-67, has nothing to do with this claim element. This passage does not refer to either a tool host or a tool, it refers to an OS device driver architecture that splits I/O functions on opposite sides of a bus, such as a PCI bus. The next passage at the top of column 14 makes this clear, explaining that the IOC 90 uses direct memory access (DMA) to transfer request messages to a local message frome on the IOC without using the CPU. This is reason enough for the Examiner to withdraw this § 103(a) rejection, because Johnson does not supply any part of the second claim element.

Sticking to Johnson, the Examiner argues (OA 3 ¶2) that *matching a first triggered report from the tools with the report and report trigger definitions to generate a first context-insensitive report before processing a second triggered report* is taught at 6:48-56, 14:16-28 and 16:41-52. First, Johnson does not record *the report and report trigger definitions*, as demonstrated above. So Johnson has nothing with which a *first triggered report* could be matched. Second, there is no reference in the cited passages to a *first triggered report from the tools*. The passage at 6:48-56 refers to a bus-level input/output queue management protocol, deep in the bowls of an OS. This very low level operation is not a *first triggered report from the tools*, it is a simple status or similar response to a low level I/O command. The passage at 14:16-28 and 16:41-52 provide details of how low level I/O queues are managed by a split level driver. None of this reads on a *first triggered report from the tools*, where the antecedent basis for *the tools* refers to *report and report trigger definitions sent by the tool hosts to the tools* and the specification [0050]-[0051] gives . An I/O host within an OS is not a tool host, as one would understand the term used in this specification. See, e.g., Application [0050].

Without either the report and report trigger definitions or a triggered report from the tools to the tool host, Johnson does not supply any part of the third claim element. This is reason enough for the Examiner to withdraw this § 103(a) rejection.

The Examiner proposes to combine Johnson and George to meet *outputting the first context-insensitive report in a field tagged format*. If this combination were permitted by patent law, it would fail. First, the proposed combination would not modify Johnson, because George operates on the opposite side of the OS interface, where the processes described in Johnson 6:48-56, 14:16-28 and 16:41-52 are invisible and inaccessible to George's translation program. One of skill in the art will appreciate that an OS typically runs drivers in protected memory space that is off limits to George's application program. Second, if the particular I/O request and status replies described in the cited passage of Johnson were processed by George's translation program, which is logically impossible, the result would be garbage. Johnson's I/O requests and reply status messages are not SECS-II or similar messages. They are formatted messages (Johnson FIGS. 3A-3F) not tagged messages.

The proposed combination is improper and not permitted as a basis for a § 103(a) rejection. First, the references are not from analogous arts. The Examiner argues that both are "related to computer data communications". That is a very loose argument that potentially could make keyboard architecture analogous to use of pulse width modulators to produce sound from a pulse code modulated signal. To call two references related to computer data communications is not enough to prove anything. These references are not from analogous arts because they are on opposite sides of the OS interface and there is no teaching in either reference that would suggest modifying Johnson's I/O device drivers to read on these claims.

Second, the proposed motivations for combining references is not persuasive, because it makes no sense to modify Johnson with George as proposed:

Johnson motivated the exploration of the art of returning a response to a request to an I/O device in a suitable format (column 16 lines 51-52 and figure 5 [109-111]) and George, motivated the exploration of the art of interfacing with subordinate devices (column 1 lines 5-10). The combination would have resulted improved by the increased flexibility of providing the output in a tagged format (George: column 1 lines 5-10, fig. 11, attachment 6 and column 6 lines 37-46) and removable listening device as taught by Walker devices (Walker: column 5, lines 7-27).

Recall with reference to FIG. 2A that Johnson is teaching a faster way to pass messages across a system bus between a host 20 and I/O adapter cards 22, 24 that are attached directly to the system bus. Converting compact, optimized bus-level messages to a tagged field format (like XML) that would need to be parsed would hobble even the bus of a super computer. No one of skill in the art would consider modifying Johnson in that way.

Third, the Examiner is using hindsight to piece together features of the references in a way that is not taught or suggested by any of these unrelated references. There is no evidentiary suggestive teaching or motivation to combine the references in the manner claimed. It is fundamental, as indicated in MPEP Section 2143.01, that the Examiner rely on some evidentiary quality suggestion from one of the references, or based on an Examiner's affidavit to modify Johnson:

Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. "The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art." *In re Kotzab*, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). See also >*In re Lee*, 277 F.3d 1338, 1342-44, 61 USPQ2d 1430, 1433-34 (Fed. Cir. 2002) (discussing the importance of relying on objective evidence and making specific factual findings with respect to the motivation to combine references); <*In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

The MPEP cites *In re Lee*, in which the Federal Circuit clarified the need for evidentiary quality support of an examiner's factual basis for finding a teaching, suggestion or motivation in the prior art (as opposed to an examiner's opinion), 277 F.3d at 1343-44:

As applied to the determination of patentability vel non when the issue is obviousness, "it is fundamental that rejections under 35 U.S.C. § 103 must be based on evidence comprehended by the language of that section." *In re Grasselli*, 713 F.2d 731, 739, 218 U.S.P.Q. (BNA) 769, 775 (Fed. Cir. 1983). ... "The factual inquiry whether to combine references must be thorough and searching." Id. It must be based on objective evidence of record. This precedent has been reinforced in myriad decisions, and cannot be dispensed with. [citation omitted] The need for specificity pervades this authority. See, e.g., *In re Kotzab*, 217 F.3d 1365, 1371, 55 U.S.P.Q.2D (BNA) 1313, 1317 (Fed. Cir. 2000) ("particular findings must be made as to

the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the manner claimed"); *In re Rouffet*, 149 F.3d 1350, 1359, 47 U.S.P.Q.2D (BNA) 1453, 1459 (Fed. Cir. 1998) ("even when the level of skill in the art is high, the Board must identify specifically the principle, known to one of ordinary skill, that suggests the claimed combination. In other words, the Board must explain the reasons one of ordinary skill in the art would have been motivated to select the references and to combine them to render the claimed invention obvious."); *In re Fritch*, 972 F.2d 1260, 1265, 23U.S.P.Q.2D (BNA) 1780, 1783 (Fed. Cir. 1992) (the examiner can satisfy the burden of showing obviousness of the combination "only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references"). ... In its decision on Lee's patent application, the Board rejected the need for "any specific hint or suggestion in a particular reference" to support the combination of the Nortrup and Thunderchopper references. Omission of a relevant factor required by precedent is both legal error and arbitrary agency action.

The outcomes of cases decided even before *In re Lee* make it clear that real evidence is required to support an asserted teaching, suggestion or motivation to modify a reference to support an obviousness finding. See, e.g., *In re Kotzab*, 217 F.3d 1365, 1369-70 (Fed. Cir. 2000) (rev'd finding of obviousness) *Kolmes v. World Fibers Corp.*, 107 F.3d 1534, 1541 (Fed. Cir. 1997) (aff'd patent not invalid). The Examiner has not produced the required objective evidence that would "lead that individual [of ordinary skill] to combine the relevant teachings of the references." *In re Fritch*, cited in *In re Lee* (above).

Applicant did not find in Johnson or George any suggestion or teaching to modify a bus level messaging protocol to improve the readability of application level SECS-II reports from a tool a tool host. The passages cited by the Examiner do not teach the invention as a whole. The Examiner's asserted motivation is a statement of the *result* of combining the references derived using the claim as a blueprint (20-20 hindsight) for the desired result, which is impermissible. 2-5 Chisum on Patents § 5.03 [2][c] n. 29 (2005 Lexis version); e.g. *ATD Corp. v. Lydall, Inc.*, 159 F.3d 534, 546, 48 USPQ2d 1321, 1329 (Fed. Cir. 1998) ("Determination of obviousness can not be based on the hindsight combination of components selectively culled from the prior art to fit the parameters of the patented invention."); *Grain Processing Corp. v. American Maize-Products Corp.*, 840 F.2d 902, 907, 5 USPQ2d 1788, 1792 (Fed. Cir. 1988) ("Care

must be taken to avoid hindsight reconstruction by using 'the patent in suit as a guide through the maze of prior art references, combining the right references in the right way so as to achieve the result of the claims in suit.' "). This claimed motivation ignores how Johnson's bus-level messaging protocol works. It revises bus-level protocol in a way that neither Johnson nor George suggests and would, if followed, destroy the primary reference's bus-level protocol. The suggested combination uses the claim as a blueprint for the revision, which is contrary to law. Therefore, the combination is improper.

We reserve for another day our many objections to combining Walker with the other references from opposite sides of the OS interface.

Therefore, claims 1, 16 and 22 should be allowable over Johnson in view of George in further view of Walker.

Claims 2-5 and 17-20

Claims 2-5 and 17-20 include limitations related to compliance with various industry-specific protocols. NONE of these protocols could run on Johnson's system bus to exchange messages between parts of a split device driver! The Examiner's arguments (OA 5 ¶ 3) do not seem to match the reality of how Johnson works.

Therefore, claims 2-5 and 17-20 should be allowable over Johnson in view of George in further view of Walker.

Claims 6 and 21

Claims 6 and 21 include the limitations:

the report trigger definitions further include time periods that trigger reporting
These limitations are not found in Johnson in view of George in further view of Walker.

Recall that the Examiner found the *report and report trigger definitions* of claims 1 and 16 in Johnson 13:63-67. That passage reads:

Each host driver writes its respective request message frame descriptor 73, 83 to a request queue labeled Request Post FIFO at 75 (in this novel example, the Request Post FIFO 75 manages request message frame descriptors from both host drivers 70, 80). Therefore, claims 6 and 21 should be allowable over Johnson in view of George in further view of Walker.

So, the Examiner would be proposing to modify Johnson's write of a bus-level request message frame descriptor to a request queue, by adding to the request *time periods that trigger reporting*. We urge the Examiner to read and understand Johnson,

because the combination really doesn't make any sense.

Therefore, claims 6 and 21 should be allowable over Johnson in view of George in further view of Walker.

Claims 13-15 and 26-28

Claims 13-15 and 26-28 should be allowable over Johnson in view of George in further view of Walker for at least the same reasons as the claims from which they depend.

Rejection Under 35 U.S.C. § 103(a) of Claims 7-12 and 23-25

The Examiner rejects **claims 7-12 and 23-25** under 35 U.S.C. § 103(a) as unpatentable over Johnson (U.S. Patent Number 6,591,310 B1) in view of George (U.S. Patent Number 5,657,252) and Walker (U.S. Patent Number 6,233,613 B1) in further view of York (U.S. Patent Number 6,505,256 B1).

Claims 7-12 and 23-25 include limitations on the form of field tagged format used for output. None of these formats are workable for Johnson's bus-level messaging between parts of a split device driver. Radically modifying Johnson is not a permissible basis for a § 103(a) rejection because it would impermissibly destroy the Johnson reference and change its principle of operation. "A proposed modification should not 'destroy a reference' by rendering the prior art invention being modified unsatisfactory for its intended purpose. *In re Gordon*, 733 F.2d 900, 902, 221 USPQ 1125, 1 127 (Fed. Cir. 1984)." Barry R.A. Weinhardt, M. Reinhart, *Obviousness Under 35 U.S.C. 103 Basic Student's Manual*, p. 24 (U.S. P.T.O. Office of Patent Policy Dissemination, Rev. 4 1998); explaining, M.P.E.P. 2143.01 and 2145, paragraph (j)(4). An intended purpose of Johnson's improved messaging across the system bus is to increase the throughput of messages. Using an HTML, XML or similar format would destroy Johnson, in the sense of rendering Johnson's invention unsuitable to meet its objective and probably impossibly unworkable.)

In addition, the modification would be improper because it would change the principle of operation described by Johnson. M.P.E.P. 2143.01; see Barry et al., *Obviousness Under 35 U.S.C. 103, supra*, pp. 25-26. "As a proposed modification or combination of the prior art should not destroy a reference, the proposed modification or combination should not change the principle of operation of the reference. *In re Ratti*, 270 F. 2d 8

10, 8 13, 123 USPQ 349, 352 (CCPA 1959). This is true even if the combination proposed is operative." Barry et al., *Obviousness Under 35 U.S.C. 103, supra*, pp. 25-26; explaining, M.P.E.P. 2143.01. Johnson proposes the lightest possible data traffic in the cleanest possible format. That is the opposite of using an HTML or XML format.

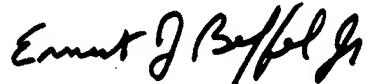
Therefore, claims 7-12 and 23-25 should be allowable over Johnson in view of George and Walker in further view of York.

CONCLUSION

Applicants respectfully submit that the pending claims are now in condition for allowance and thereby solicit acceptance of the claims as now stated.

Applicants would welcome an interview, if the Examiner is so inclined. The undersigned can ordinarily be reached at his office at (650) 712-0340 from 8:30 to 5:30 PST, M-F and can be reached at his cell phone (415) 902-6112 most other times.

Respectfully submitted,



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